PROJECT CHARGE: 1703

PROJECT TITLE: CIGARETTE MAKING TECHNOLOGY

PROJECT LEADER: A. Robinson

PERIOD COVERED: October 1 - 31, 1985

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TOBACCO ADHESIVE STUDIES (T. E. Majewski)

Several batch samples of sucrose solutions were made, in cooperation with Project 1806 personnel, and evaluated in the foamed injection process on the cigarette maker. The first batch of adhesive material was prepared by the reaction of calcium acetate with sucrose at ~ 95°C. The second batch by heating the sucrose solution at ~ 95°C after being made basic (pH ~ 10) with sodium hydroxide. The cigarettes are in the process of being analyzed for firmness and loose ends. Visual observation of the two cigarettes shows the one made using the sucrose/calcium acetate to hold the tobacco shreds together whereas the one made with sucrose/sodium hydroxide does not.

The minimum amount of calcium acetate needed to react/complex with sucrose to produce a coherent film on drying was found to be 6% by weight based on the amount of sucrose present. The mixture forms a stable foam with licorice.

Aluminum hydroxide was found to produce an adhesive-like material with sucrose which also produced a coherent film and produced a stable foam with licorice.

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